



UNITED STATES PATENT AND TRADEMARK OFFICE

mj
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,700	08/05/2003	A-Jung Kim	5000-1-438	7551

33942 7590 04/05/2007
CHA & REITER, LLC
210 ROUTE 4 EAST STE 103
PARAMUS, NJ 07652

EXAMINER

LOVING, JARIC E

ART UNIT	PAPER NUMBER
----------	--------------

2137

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/634,700	Applicant(s) KIM ET AL.	
	Examiner Jaric Loving	Art Unit 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is responsive to Applicant's amendment received on January 17, 2007.
2. The objection to claim 1 has been withdrawn due to Applicant's amendment.
3. Applicant's arguments filed on January 17, 2007 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sala et al., US 2003/0117998 and further in view of Rothenberg, US 5,432,850.

In claim 1, Sala discloses a method for transmitting security data between an OLT (Optical Line Termination) and a destination user in an EPON (Ethernet Passive Optical Network) system having a plurality of ONUs (Optical Network Units) connected to a plurality of users and the OLT the method comprising the steps of:

a) a security frame having an ONU ID field for indicating ONU ID information identified by an ONU with the destination user and a user ID field for indicating a security ID identified by the destination user, wherein the ONU ID field includes a group ID bit field, a logical link ID field and a security ID field, said ONU ID field configured to

provide a virtual group ID for a plurality of entities controlled by a single ONU (paragraphs [0009]-[0012], [0058]-[0061]; [0063]-[0064], [0069], [0073]-[0074], [0076], [0079], [0088], [0094]-[0095], [0114]); and

b) transmitting the transmission frame (paragraphs [0009]-[0012], [0047]-[0048], [0051]-[0053]).

Sala fails to disclose creating a transmission frame comprised of a data field for encrypting the security data and a key information field for storing key information used for decrypting the encrypted data of the data field. Rothenberg discloses creating a transmission frame comprised of a data field for encrypting the security data and a key information field for storing key information used for decrypting the encrypted data of the data field (col. 3, lines 18-57).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Sala's method of forwarding frames within an optical network with Rothenberg's method for secure data transmission utilizing data encryption and a key to enhance security. It is for this reason that one of ordinary skill in the art would have been motivated to provide Sala's method of forwarding frames within an optical network with data encryption and a key because it allows a secured transmission of data on a shared network (Rothenberg, col. 2, lines 1-8).

In claim 2, Sala, as modified, discloses the method as set forth in claim 1, wherein the security frame further includes a designator field for storing information of a group of the ONUs and the users (Sala, paragraph [0058]).

In claim 3, Sala, as modified, discloses the method as set forth in claim 1, wherein the security frame further includes a MDF (Management Defined Field) for storing MIB (Management Information Base) information and associated protocol information (Sala, paragraph [0058]).

In claim 4, Sala, as modified, discloses the method as set forth in claim 1, further comprising the step of: c) transmitting the transmission frame to the users connected to the ONUs for identifying the ONU ID field contained in the security frame of the transmitted frame (Sala, paragraphs [0009]-[0012], [0047]-[0048], [0067]-[0069], [0076]).

In claim 5, Sala, as modified, discloses the method as set forth in claim 1, further comprising the steps of: selecting at least one user who can identify contents of the ONU ID field contained in the security frame from among the plurality of users connected to the ONUs for identifying the ONU ID field, and transmitting the transmission frame to the selected user (Sala, paragraphs [0050]-[0053], [0058], [0066]-[0069] – at least one subscriber selected to use services).

Response to Arguments

6. Regarding claims 1-5, Applicant basically argues the Sala and Rothenberg combination does not disclose claim 1 and therefore the remaining claims are allowable.

As to claim 1, Applicant argues "Sala fails to suggest or teach... wherein the ONU ID field includes a group ID bit field, a logical link ID field and a security ID field, said ONU ID field configured to provide a virtual group ID for a plurality of entities controlled by a single ONU." Examiner contends Sala discloses this limitation. In Sala,

Art Unit: 2137

paragraphs [0074], [0094]-[0095], Sala mentions a tag identifier field (TID), which provides a basis for grouping based on destination based on where a frame is sent. In paragraphs [0074] and [0088], Sala discusses a mode field which establishes the logical link such as P2P. In paragraphs [0069] and [0076], Sala mentions the presence of a security field. Finally, in paragraphs [0070]-[00763] and [0076], Sala discusses the use of a virtual LAN tag control information field. Therefore, Sala discloses the relevant fields configured to provide a virtual group ID for a plurality of entities controlled by a single ONU.

Next, Applicant argues "Rothenberg fails to suggest or teach... wherein the ONU ID field includes a group ID bit field, a logical link ID field, and a security ID field, said ONU ID field configured to provide a virtual group ID for a plurality of entities controlled by a single ONU." Rothenberg was not cited for the above teaching, but for the respective teaching not found in Sala. However, Sala has been discussed above as disclosing the relevant limitation.

The remaining claims follow the reasoning above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2137

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaric Loving whose telephone number is (571) 272-1686. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

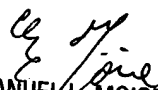
Application/Control Number: 10/634,700

Page 7

Art Unit: 2137



JL



EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER